PROGRAM-10[TCP]

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```
//server
#include <stdio.h>
#include <netdb.h>
#include <netinet/in.h>
#include <stdlib.h>
#include <string.h>
#include <sys/socket.h>
#include <sys/types.h>
#define MAX 80
#define PORT 8080
#define SA struct sockaddr

void func(int sockfd)
{
  char buff[MAX];
  int n;
  for(;;){
    bzero(buff, MAX);

    read(sockfd, buff, sizeof(buff));
    printf("From client: %s\t To client: ", buff);
    bzero(buff, MAX);
    n=0;
    while((buff[n++]=getchar())!='\n');
    write(sockfd, buff, sizeof(buff));
    if(strncmp("exit", buff, 4)==0){
      printf("Server Exit...\n");
    }
  }
}
```

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```
int main()
{
int sockfd, connfd, len;
struct sockaddr_in servaddr, cli;

sockfd = socket(AF_INET, SOCK_STREAM, 0);
if(sockfd == -1){
  printf "Socket creation failed \n");
  exit(0);
}
else
  printf("Socket successfully created \n");
bzero(&servaddr, sizeof(servaddr));

servaddr.sin_family = AF_INET;
servaddr.sin_addr.s_addr = htonl(INADDR_ANY);
servaddr.sin_port = htons(PORT);

if((bind(sockfd, (SA*)&servaddr, sizeof(servaddr)))!=0)
{
  printf("socket bind failed...\n");
  exit(0);
}
else printf("Socket successfully binded..\n");

if((listen(sockfd,5))!=0){
  printf("Listen failed...\n"); exit(0); }
else printf("Server listening...\n");
len = sizeof(cli);
connfd = accept(sockfd, (SA*)&cli, &len);
if(connfd<0){ printf("server accept failed...\n"); exit(0);}
else printf("server accept the client...\n");
func(connfd);
close(sockfd); }
```

```
// client

void func(int sockfd)
{ char buff[MAX];
  int n;
  for (;;){ bzero(buff, sizeof(buff));
  printf("Enter the string: ");
  n=0;
  while ((buff[n++]=getchar())!='\n');
  write(sockfd, buff, sizeof(buff));
  bzero(buff, sizeof(buff));
  read(sockfd, buff, sizeof(buff));
  printf("From Server: %s", buff);
  if ((strncmp(buff, "exit", 4))==0){ printf("Client Exit...
  break; }
}
}

int main(){
  int sockfd, connfd;
  struct sockaddr_in serveraddr, cli;
  sockfd=socket(AF_INET, SOCK_STREAM, 0);
if (sockfd==-1){ printf("socket creation failed...\n");
  exit(0); }
else printf("Socket Successfully created..\n");
bzero(&servaddr, sizeof(servaddr));
servaddr.sin_family=AF_INET;
servaddr.sin_addr.s_addr=inet_addr("127.0.0.1");
servaddr.sin_port=htons(PORT);
if (connect(sockfd, (SA*)&servaddr, sizeof(servaddr))
printf("connection with the server failed...\n"); exit(0);
else printf("connected to the server..\n");
func(sockfd); close(sockfd); }
```